

Serial No. 09/687,348
Response Dated December 1, 2004
Reply To Office Action Of June 1, 2004

Amendments to the Claims

1. **(Cancelled)** A method for use in a node of a packet network, the method comprising the steps of:
 - replicating a packet for transmission over at least two diverse communications paths; and
 - multi-selecting a packet from at least two diverse communications paths.
2. **(Cancelled)** The method of claim 1 wherein the packet is a signaling packet.
3. **(Cancelled)** The method of claim 1 wherein the at least two diverse communications paths used for replicating and multi-selecting are the same.
4. **(Cancelled)** The method of claim 1 wherein the replicating step utilizes an Internet Protocol (IP) for transmission over the at least two diverse communications paths.
5. **(Cancelled)** The method of claim 1 wherein each replicated packet conveys an identical packet identifier.
6. **(Cancelled)** The method of claim 1 wherein each replicated packet conveys an identical packet identifier in an additional shim header of a multiprotocol label switching (MPLS) packet.
7. **(Cancelled)** A method for use in a node of a packet network, the method comprising the steps of:
 - identifying at least two diverse communications paths to another node of the packet network; and
 - replicating a packet destined for the other node of the packet network for transmission over the at least two diverse communications paths.

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8. **(Cancelled)** The method of claim 7 wherein the packet is a signaling packet.
9. **(Cancelled)** The method of claim 8 wherein the other node is a neighboring node in a network topology of an underlying transport network.
10. **(Cancelled)** The method of claim 8 wherein the replicating step includes the step of inserting a sequence number into the packet for use by the other node in receiving the replicated packets.
11. **(Cancelled)** The method of claim 10 wherein the sequence number is inserted into an additional shim header of a multiprotocol label switching (MPLS) packet.
12. **(Cancelled)** The method of claim 8 wherein the packet is formatted in accordance with an Internet Protocol (IP).
13. **(Currently Amended)** A method for use in a node of a packet network, the method comprising the steps of:
receiving multiple copies of a signaling packet from at least two diverse communication paths;
calculating a counter value related to a received packet identifier;
comparing the counter value with a packet identifier in each of the multiple copies of the received signaling packet to identify the multiple copies of the signaling packet;
and
selecting one of the received multiple copies of the packet as a function of a in response to comparing each packet identifier in the received multiple copies of the packet, wherein the one signaling packet selected is chosen without regard to the diverse communication path on which it is received.

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14. **(Currently Amended)** The method of claim 13 wherein the packet network is a signaling packet network for a transport network, wherein the at least two diverse communication paths are communication paths to a neighboring node of said node, wherein the neighboring node is determined as a function of a network topology of the transport network.

15. **(Currently Amended)** The method of claim 13 wherein the packet identifier is a sequence number value, wherein the step of selecting includes selecting the packet received first from any of said at least two diverse communication paths having a sequence number that at least matches the counter value, and wherein the method further includes the step of incrementing the counter value if the counter value is at least matched.

16. **(Currently Amended)** The method of claim 15 wherein the selecting step includes the steps of:

if a value of the sequence number value of a received copy of the signaling packet is less than a counter value, discarding the received copy; and

if the value of the sequence number value of the received copy of the signaling packet is equal to the counter value, accepting the received copy.

17. **(Currently Amended)** The method of claim 15 wherein the selecting step includes the steps of:

if a value of the sequence number value of a received copy of the signaling packet is less than a counter value, discarding the received copy; and

if the value of the sequence number value of the received copy of the signaling packet is not less than the counter value, accepting the received copy.

18. **(Cancelled)** A method for use in a node of a packet network, the method comprising the steps of:

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establishing a pair of physically disjoint paths to an other node that is a neighboring node in a transport network; and

replicating a packet destined for the other node of the packet network for transmission over the pair of physically disjoint paths.

19. (Cancelled) The method of claim 18 wherein the replicating step includes the step of inserting a sequence number into the packet for use by the other node in receiving the replicated packets.

20. (Cancelled) The method of claim 19 wherein the sequence number is inserted into an additional shim header of a multiprotocol label switching (MPLS) packet.

21. (Currently Amended) The method of claim 48-13 wherein the signaling packet is formatted in accordance with an Internet Protocol (IP).

22. (Cancelled) A method for use in a node of a packet network, the method comprising the steps of:

establishing a pair of physically disjoint signaling paths to an other node that is a neighboring node in an underlying transport network; and

replicating a signaling packet destined for the other node of the packet network for transmission over the pair of physically disjoint signaling paths.

23. (Cancelled) The method of claim 22 wherein the replicating step includes the step of inserting a sequence number into the signaling packet for use by the other node in receiving the replicated packets.

24. (Cancelled) The method of claim 23 wherein the sequence number is inserted into an additional shim header of a multiprotocol label switching (MPLS) packet.

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25. (Cancelled) The method of claim 22 wherein the signaling packet is formatted in accordance with an Internet Protocol (IP).

26. (Cancelled) A communications system comprising:
a number of nodes, each node storing at least two diverse communications paths to a neighboring node, wherein the neighboring node is determined as a function of a network topology of a transport network; and wherein each node, when transmitting a packet to the neighboring node, replicates the packet for transmission over the at least two diverse communications paths.

27. (Cancelled) A communications system comprising a signaling network, the communications system comprising:
a number of nodes, each node storing at least two diverse communications paths to a neighboring node, wherein the neighboring node is determined as a function of a network topology of an underlying transport network; and wherein each node, when transmitting a signaling packet to the neighboring node, replicates the signaling packet for transmission over the at least two diverse communications paths.

28. (Cancelled) A communications system comprising:
a number of nodes, each node of the network performing dual-feeding and dual-selecting of messages on diverse paths.

29. (Cancelled) A communications system comprising a signaling network, the communications system comprising:
a number of nodes, each node of the signaling network performing dual-feeding and dual-selecting of signaling messages on diverse signaling paths.

30. (Cancelled) A node for use in a network, the node comprising:
a memory for storing a routing table identifying at least two physically diverse communications paths to a neighboring node; and

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a processor for causing a packet to be replicated for transmission over the identified at least two physically diverse communications paths to the neighboring node.

31. (Cancelled) The node of claim 30 wherein the packet is a signaling packet.
32. (Cancelled) The node of claim 30 wherein the packet is formatted in accordance with an Internet Protocol (IP).
33. (Cancelled) The node of claim 30 wherein each replicated packet conveys an identical packet identifier.
34. (Cancelled) The node of claim 30 wherein each replicated packet conveys an identical packet identifier in an additional shim header of a multiprotocol label switching (MPLS) packet.
35. (Cancelled) A transmission frame representing a packet embodied in a transmission signal, the transmission frame comprising:
 - a header; and
 - a packet identifier value for use in discriminating between multiple copies of the packet.
36. (Cancelled) The transmission frame of claim 35 wherein the packet identifier is conveyed in an additional shim header of a multiprotocol label switching (MPLS) packet.
37. (Cancelled) A transmission frame representing a signaling packet embodied in a transmission signal, the transmission frame comprising:
 - a signaling message for use in establishing a connection in an associated transport network; and
 - a signaling packet identifier value for use in discriminating between multiple copies of the signaling packet.

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38. (Currently Amended) The ~~transmission frame~~ method of claim 37-13 wherein the signaling packet identifier is conveyed in an additional shim header of a multiprotocol label switching (MPLS) packet.

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